





**July 1 – September, 30 2013** 

#### **ACCOMPLISHMENTS**

## NMSAS & National Park of American Samoa – Memorandum of Agreement – Joint Work

NMSAS and National Park of American Samoa (NPAS) entered into an MOA to work on joint tourism projects and opportunities. Areas of joint work will include village-based marine protected areas ecotourism development opportunities, coordinated education and outreach, the sanctuary advisory council, and additional opportunities for collaboration. Strong interagency coordination works towards identification of common goals and priority issues, community engagement, and more effective in natural resource conservation.

## Astronaut Honored by the National Marine Sanctuary of American Samoa



The National Marine Sanctuary of American Samoa was proud to host a public seminar by Christina Hammock, member of NASA's newest astronaut class. Christina, Chief at the NOAA Climate Observatory on the island of Tutuila, presented to a packed house at the Tauese P.F. Sunia Ocean Center on her previous work as an engineer at NASA and at remote outposts across the world, including Antarctica, Greenland, northern Alaska, and American Samoa. The audience included a large proportion of local high school students, who peppered her with questions about how to become an astronaut and what she will be doing as a part of the space program. Christina inspired youth and adults alike and commended the work of the National Marine Sanctuary in American Samoa. Christina is one of eight astronaut candidates selected from a pool of over 6,000 applicants. She starts astronaut training in August 2013 and will be

wearing her sanctuary shirt and cap while she "tinkers" on the International Space Station. The National Marine Sanctuary of American Samoa work with many partners to provide unique and inspiring science-related learning and opportunities for students and community members to interact with science professionals.

# Updating the Joint Enforcement Agreement and Enforcement Training

Sanctuary team members coordinated with local and Hawaii-based NOAA Office of Law Enforcement agents to provide input on the Joint Enforcement Agreement with the American Samoa Department of Marine and Wildlife Resources who patrol sanctuary management areas and provide enforcement-related outreach to protect cultural and natural resources. Additionally, the sanctuary was represented at a NOAA Office of Law Enforcement and NOAA Coral Reef Conservation Program Joint Enforcement Training. The training was held in partnership with









the Pacific Islands Managed and Protected Area Community. Topics covered included updating enforcement agreements, new and existing territorial and federal regulations, species identification, and next steps. Enforcement-related patrols, outreach and education efforts, and reporting involves multiple territorial and federal personnel and well-coordinated efforts are essential in the protection of sanctuary resources.

## Coral Reef Advisory Group - American Samoa

Sanctuary team members participated in a meeting of the Coral Reef Advisory Group – American Samoa. Topics of discussion included the upcoming Two Samoas Workshop, grant opportunities and possibilities for collaboration, Shark Conservation Act public comment period, and local education and outreach initiatives. Strong interagency coordination works towards identification of common goals and priority issues, community engagement, and more effective in natural resource conservation.

#### Crown-of-Thorn Starfish Removal Effort

Sanctuary team members continue to work with representatives of the National Park of American Samoa, Department of Marine and Wildlife Resources, and representatives of the Coral Reef Advisory Group – American Samoa, to develop & coordinate crown-of-thorns starfish (COTS) removal efforts. COTS eat corals, and though normally present at very low levels, outbreaks with thousands to millions of individuals can occur, decimating reefs. In the late 1970's, an outbreak killed over 90% of the corals in Fagatele Bay. Reported outbreaks at outer banks and nearshore areas around the island of Tutuila and the National Marine Sanctuary of American Samoa have been spotted by various territorial agencies. Agency partners will continue to remove COTS opportunistically while working toward a larger coordinated removal effort in early 2014. Coordinating removal efforts will better address a major threat to coral reefs in American Samoa. This issue is also a potential opportunity for regional ONMS collaboration to address a threat facing a national marine sanctuary.

## Interpretive Training w/ National Park Service





The sanctuary team coordinated a training on *How* to *Develop* Effective Interpretive Programs for our sanctuary communities - an effort that will equip them in

understanding the importance of connecting visitors to the resources in and around their 'special place'. The training was executed in two sessions. The first session was conducted in class where









the Interpretive Process Model was explained and discussed at length. The second session was a field trip to the National Park of American Samoa in Vatia where everything learnt in class was put together. The training was held in partnership with the National Park Service of American Samoa. Topics covered included identifying tangible resources, linking in the tangible resources to intangible larger intangible meanings, identifying universal concepts that are relevant to everyone, identifying audience, writing a theme statement, methods to link the 'tour guide' to resource and audience, and organizing opportunities into a sequence. Efforts will help foster and sustain strong interagency coordination; assist community engagement in developing eco-place excursion programs; connecting visitors to the resources. A goal is to work with communities to provide detailed information on history, cultural and natural points of importance, special folk lore stories, and facts they would like the visitor to know about their special sanctuary.

# Discussion of Management Needs for the Muliava Unit / Rose Atoll Marine National Monument with Co-Manager

Superintendent Gene Brighouse and Research Coordinator Wendy Cover met with USFWS Rose Atoll Manager Frank Pendleton to discuss the current management situation and the potential for collaboration in outreach and science efforts. We drafted a plan of the main issues to discuss in an upcoming meeting with the other co-manager from NMFS, including permits, outreach, research, emergency ship groundings, guiding principles, and enforcement. The Ocean Center was offered up as a location for USFWS outreach about Rose. We also discussed mutual science needs, the NMSAS Science Plan, and planning for a reef monitoring program that is comparable throughout monument, sanctuary, and refuge waters. The meeting served to maintain strong connections and communication between co-managing agencies.

# Coral Reef Advisory Group American Samoa – Sanctuary Presentation and New Regulations Discussion

Sanctuary team members participated in a meeting of the Coral Reef Advisory Group – American Samoa. Participants included representatives from the American Samoa Department of Marine and Wildlife Resources, Coral Reef Advisory Group, Western Pacific Regional Fisheries Management Council, United States Department of Agriculture – Natural Resources Conservation Service, NOAA Coral Reef Conservation Program, American Samoa Environmental Protection Agency, National Park American Samoa, United States Fish and Wildlife Service, NOAA Pacific Island Regional Office, and the sanctuary. Topics of discussion included the Shark Conservation Act, climate change funding opportunities, Population Policy Workshop, and Western Pacific Regional Fisheries Management Council report. Additionally, Sanctuary Superintendent Gene Brighouse gave a presentation covering the 6 management areas of the expanded sanctuary, resource protection, community engagement and economic development opportunities, research, education and outreach programs, and collaborative enforcement. A discussion followed on new regulations and activities that are allowed and prohibited in each sanctuary management area and the Rose Atoll Marine National Monument.









## Le-Tausagi's 2013 Enviro-Discovery Summer Camp



The National Marine Sanctuary of American Samoa and other local/federal Environmental Agencies that make up LE- TAUSAGI, organized and hosted an annual Enviro-Discovery Summer Camp 2013 at Utulei Beach. This year, the camp lasted for 2 nights and 3 days (7/23-7/25) and had over 50 participants of ages 5 to 18. The purpose of the camp was to share with students why it is important to take care of our ocean and land. Coral Reef Advisory Group (CRAG), Pacific Island Regional Office

(NOAA-PIRO), and National Marine Sanctuary of American Samoa (NMSAS) focused on Marine-related activities, while Natural Resources Conservation Service (USDA NRCS), American Samoa Environmental Protection Agency (AS-EPA), Department of Commerce (DOC), National Park Services (NPS), and Department of Youth and Women's Affairs prepared land activities. The participants were able to tour the Tauese P.F. Sunia Ocean Center as it was only a walking distance away from their camp site. The camp ended with an award ceremony, an eventful occasion which showed evidence of how students connected with their environment and with each other.

# Coordinating New and Ongoing Efforts Relating to Marine Protected Areas in American Samoa



Sanctuary team members hosted a meeting to plan new and coordinate ongoing efforts involving outreach to

communities relating to marine protected areas and the National Marine Sanctuary of American Samoa.

Participants included

representatives from the American Samoa Department of Marine and Wildlife Resources (DMWR) – MPA Program, DMWR – Community-Based Fisheries Management Program, DMWR – Enforcement Program,



Coral Reef Advisory Group – American Samoa, Western Pacific Regional Fisheries Management Council, NOAA Coral Reef Conservation Program and Coastal Zone Management Program Liaison, and National Park American Samoa. Participants briefed the group on their MPA-related outreach programs, messages, target audiences, and village projects. Needs relating to informing communities of the expanded sanctuary and activities allowed in each of the sanctuary management units, marine debris, and climate change resiliency were also covered.









Additionally, opportunities for collaboration and developing common messages and language to inform communities and reduce confusion about multi-agency MPA and marine resource protection efforts were discussed. The meeting provided an opportunity to discuss common goals, maximize MPA community outreach efforts, and identify additional needs. Strong interagency coordination works towards identification of priority issues, community engagement, and more effective in natural resource conservation.

## **Hollings Fellow Completed Climate Change Assessment**



Sarah Seabrook completed her summer's work as a Hollings Scholar to an audience that included the local Department of Marine and Wildlife Resources. She compiled information from primary literature on specific responses of corals and fishes to the main climate change impacts of coral bleaching and ocean acidification. She then overlaid this information on past surveys of coral and fish abundances in the Sanctuary to better understand how pulse stress events such as cyclones and starfish predation will interplay with future climate change impacts. Over the last several weeks, she conducted surveys of coral cover at three sites and she used this data to predict how coral community composition is likely to change in the future. Her work addresses one of

the NMSAS Action Plan items and will inform management on how reefs are expected to change in the near future.

## **Ocean Star Summer Program**





The Ocean Star Summer Program, hosted by the National Marine Sanctuary of American Samoa in July was four week hands-on learning, active discovery and student engagement. The program was to inspire and encourage children of ages 10-12 to learn

and discover all that they can about the ocean in order to develop appreciation of their natural and cultural resources. Students went through four weeks of the following topics: introduction to coral reefs; importance of coral reefs; threats to coral reefs; what can you do to save our ocean. During their awards ceremony yesterday, students shared how much they have learned about the ocean and how they have developed appreciation for the ocean.

#### **DOE Teacher Orientation Week**





NMSAS Communication & Outreach Coordinator was one of the presenters for the







American Samoa Department of Education's Teacher Orientation Workshop. Isabel presented on Tuesday, Wednesday, and Thursday (August 6-8, 2013) for a total of 5 hours. Teachers were informed of the mission, vision, and goal of NMSAS. They also participated in numerous activities that integrate marine science and other core subject areas. About 200 teachers participated in Isabel's "Bringing the Ocean into the Classroom" presentation. Teachers took with them a sense of appreciation for the ocean, as well as knowledge that they could use to better inform their students of one of our most precious resources, our ocean.

## Two Samoa's Reef Resiliency Workshop



The sanctuary team participated in a week-long workshop on reef resilience for MMA practitioners. Presenters were from the Secretariat of the Pacific Regional Environmental Program (SPREP), The Nature Conservancy Indo Pacific Region (TNC), South Pacific Commission (SPC), Coral Reef Advisory Group (CRAG), Department of Marine and Wildlife Resources) DMWR, and NOAA PIRO, Topics ranged from being able to utilize biophysical principles for designing resilient MPA Networks to realizing the impacts climate change has on

Samoan marine ecosystems, to identifying mechanics by which the 2Samoas can work towards developing MMA networks. Some Design Principles were also developed during the workshop. The delegation from Independent Samoa consisted of 14 participants and one from Guam. Identifying information needs in the Samoan Archipelago and providing updates on regional initiatives and opportunities to support the 2Samoa MMA Network. Also to identify mechanisms by which the 2Samoas can work towards developing an MMA network.

## **Swains Island Expedition: August 2013**

Jean Michel Cousteau, visited Swains Island along with the Director of National Marine Sanctuaries, Mr. Dan Basta, as well as some local government officials on August 24<sup>th</sup>, 2013. A team of scientists and divers (maritime archaeologists) led by Dr. Hans Van Tilburg of the National Marine Sanctuaries Maritime Heritage Program also joined this mission.







Lt. Governor Lemanu Mauga, Jean-Michel Cousteau, Dan Basta, scientists and team on Swains Island









#### Port Assessment for Future Vessel Needs

Dana Wilkes, head of the Vessels program for ONMS visits Swains to assess family's needs to place a dock on the island and potential vessel mooring to give to the Jennings family. Dana also visited Manu'a to assess Ta'u and Ofu harbor conditions for NOAA vessels and/or other vessels for tourism/visitor development.

## **Exploring Socioeconomic Opportunities**

Rick Gaffney - CEO of Pacific Boats & Sales Inc. visited American Samoa as part of the team to meet with the private sector, game fisherman, vessel and dive operators on potential economic opportunities and accelerating investor interests in American Samoa. Rick met with individuals, businesses and made connections with local partners on future potential economic drives for the Territory.

## Traditional AVA Ceremony in August



Jean-Michel Cousteau, Dan Basta, Rick Gaffney and other team members from the mainland were welcomed by the Honorable Governor Lolo Matalasi Moliga of American Samoa. As is the usual tradition, an ava ceremony is performed to welcome our overseas guests. In Samoa, no important gathering, no significant undertaking, no momentous ceremony, is complete and worthy without the 'Ava ceremony.

## **One-Year Anniversary of the Ocean Center**

August marked one year of service for the Tauese P.F. Sunia Ocean Center. The ceremony was witnessed by the Honorable Governor Lolo Matalasi Moliga, First Lady Cynthia Moliga, government officials, dignitaries, local citizens and agencies. Since its opening, the Ocean Center













has served more than 9,000 visitors. Among the new items launched during the one year event, the National Marine Sanctuary of AS' new film – "Penina Tutasi i Amerika Samoa" made its debut for the first time to our local audience.

## Jean-Michel Cousteau presents at the Tauese P.F. Sunia Ocean Center



Over one hundred and thirty members of community, in American Samoa, received the honor to witness renowned ocean explorer Jean-Michel Cousteau present at the Tauese P.F. Sunia Ocean Center.

Jean-Michel Cousteau mentioned, 70% of our planet is the ocean and there are so many benefits that the ocean provides for the world that has yet to be discovered as we've only explored maybe 5% of our ocean.

In closing, he left the audience with a thought in mind, "Protect The Ocean, Protect Yourself". He encouraged the audience to become

ocean ambassadors and help stop the world from using the ocean "as a garbage can and universal sewer."

## **Biological Assessment on Swains Island**



NMSAS was a part of the larger Swains Island expedition which returned to Tutuila this week after a week of research on and around Swains. Research Coordinator Wendy Cover conducted a biological assessment of the outer reef and reef flats, with the help of representatives from Western Samoa and the local DMWR. Reefs were surveyed to assess coral cover, coral disease and predation, macroalgal growth, macroinvertebrates, and large fishes. Sea cucumbers, currently a lucrative export item, are present in very low densities, likely due to high coral

cover and low availability of sandy habitat, making their proposed collection not worthwhile from a business perspective and unsustainable from an ecological perspective. These surveys are the first since Swains became a part of the Sanctuary, and they give us a broader picture of the current state of the reefs in this remote and unique island system.









#### American Samoa's First Lady Visits Great Lakes Sanctuary



In September, First Lady of American Samoa Cynthia Moliga made a special visit to Alpena, home of Thunder Bay National Marine Sanctuary. Moliga was in Michigan for the annual First Lady Summit, and was inspired by her recent visit with Dan Basta in American Samoa to visit Thunder Bay, and experience firsthand the similarities between the sites and the communities in which they are encouraged to thrive. Moliga toured the sanctuary visitor center, northeast Michigan's premiere hyperbaric facility, and downtown businesses who partner with the sanctuary. Alpena Community

College President and Sanctuary Advisory Council chair Olin Joynton also enjoyed meeting with the First Lady and sharing his sanctuary experiences and goals for future partnerships.

### NMSAS Featured in Two Samoa's Exchange Forum

On September 10th, NMSAS was featured at the Two Samoa Exchange Visit meeting which was hosted by the local Department of Marine and Wildlife Resources. The





Two Samoa Exchange visit provided information sharing on experiences and knowledge between communities participating in conservation such as Marine Protected Areas in the two countries. NMSAS presented and shared information about the National Marine Sanctuary of American Samoa, *in the Samoan language*, to our visiting friends as well as staff of the Department of Marine and Wildlife Resources. There were 24 participants from the Independent State of Samoa which included community members from the 4 Samoa islands, (Upolu, Savai'i, Apolima and Manono), and government staff/officials of the Ministries of Agriculture, Forestry and Fisheries (MAFF) and Natural Resources and Environment (MNRE). On September 12th, the visitors from Samoa visited the National Marine Sanctuary of American Samoa and the Ocean Center. Sharing information about the unique level of marine protected areas that exist in American Samoa.









#### Socioeconomic Research

The National Marine Sanctuary of American Samoa is developing a project with the University of Michigan, Institute for Research on Labor, Employment, and the Economy. The sanctuary team met with the American Samoa Community College (ASCC) representative on the sanctuary advisory council, Kelley Anderson, to discuss ASCC involvement in the implementation phase of the project. The project will explore strategies that can be implemented to increase responsible economic development associated with the sanctuary and how to build better partnerships to address community needs while protecting marine and cultural resources. The project is being informed by a similar study conducted at our sister sanctuary, Thunder Bay National Marine Sanctuary, and adapted for the needs of American Samoa.

### American Samoa Visitors Bureau

The sanctuary team met with David Vaeafe, Executive Director of the American Samoa Visitors Bureau and sanctuary advisory council member. Topics of conversation included accessibility of sanctuary sites, ocean recreation and community-based ecotourism experiences, building local capacity, and opportunities for raising awareness of the sanctuary locally, nationally, and internationally. Additionally, opportunities for sanctuary advisory council involvement and the council's Tourism Working Group were discussed.

#### **Sanctuary Wellness-Tae Bo Fitness:**



The Sanctuary Wellness-Tae Bo Fitness Program continues to be on demand since its beginning on May 28<sup>th</sup>, 2013. This additional community service is on its 6<sup>th</sup> month and it has been a great success and extremely beneficial to a lot of our community members. Every session brings in new participants from government

agencies and the public at large. The idea to promote healthy living and to share information about the importance & value of people and place has been at the fore of this program.

More than 60 people continue to participate in each session including visits from the Lt. Gov. of American Samoa and representatives from various ASG departments: AS-EPA, Public Safety (Marine Patrol), Homeland Security, Legal Affairs, ASG Print Shop, DHSS, DOH, DMWR,









DOE, Treasury, private businesses and residents of Tafuna, Faga'alu, Utulei, Fagatogo, and Pago Pago villages.

## Ocean Swimming Ocean Science (OSOS)



The National Marine
Sanctuary of American
Samoa & the Department of Education
(ASDOE) are in the last stretch of Year 2, a partnership where students



enroll in a credit course lead by NMSAS and the American Samoa Aquatic Agency. The Ocean Swimming/Ocean Science (OSOS) program started in Spring 2012, teaching students about ocean safety/swimming, marine science and valuing our natural resources. With an enrollment of 25 new students, the class is comprised of juniors and seniors. We have had 100 students enrolled in this program, and still have a waiting list. New this semester, the OSOS students are participating in American Samoa Environmental Protection Agency's adopt a stream program. They felt the necessity to adopt and keep the Utulei beach clean. For the last stretch of the class, students will be going on six field trips and participating more on hands-on/real life experiences. As a culminating event, they will showcase their NOW WHAT projects to a group of environmental agencies, in hopes of entering 2014's YOUTH OCEAN SUMMIT.

## Research for Grant Proposals

NMSAS has partnered with outside scientists to submit several research proposals for funding. One project will assess the presence and toxicity of chemical contaminants in Sanctuary sites and around the island; an issue that is of special interest given the proximity of dump sites to marine protected areas. We also joined with CRAG and NOAA Fisheries to submit a proposal to develop sea-level rise models to help prepare villages for future inundation. Another proposal will fund a joint coral monitoring training with CRED, DMWR, and NMSAS. All research will further the science mission of NMSAS.











### **Visitor Count to the Ocean Center**

The Visitor Center has been a hub for almost 10,000 visitors in a year; the facility continues to be an effective outreach/education place to showcase ocean conservation and the importance of people and place in the Territory to residents and visitors.

SCHEDULED TOURS	VISITOR COUNT
Meetings\Conferences	1131
Government Agencies	376
Civic Groups	37
Teachers/Education	115
Private Sector	78
Village/Communities	1149
Families	245
Schools	3769
Cruise Ships	1385
Walk Ins	1343
TOTAL VISITORS:	9628



Tauese P.F. Sunia Ocean Center Visitor Count

Meetings\Conferences

12%

Government Agencies

14%

Teachers/Education
1%

Private Sector
1%

Meetings\Conferences

Civic Groups
0%

Teachers/Education
1%

Private Sector
1%

Meetings\Conferences
Government Agencies
3%

Meetings\Conferences
Government Agencies
Teachers/Education
Village/Communities
Teachers/Education
Teachers/Education
Village/Communities
Teachers/Education
Teacher



